

**UNIVERSITY OF LOUISVILLE**  
**Proposed Projects Involving the General Fund (cash or bonds)**  
(amounts in **bold** are the total budget)

**2018-2020**

(Projects listed by agency priority; descriptions are from the agency submission)

**1 Upgrade - STEM Instruction Building** **\$50,000,000**

This project will renovate and upgrade classrooms, instructional laboratories and student support space in the Life Science, Natural Science, and Chemistry buildings, as well as the Speed School of Engineering to improve performance outcomes of the university's various STEM programs. (C-PI)

- **ADDITION: During testimony at the board's July meeting, U of L representatives testified there are eight buildings involved in this project. The university's capital plan is being updated to reflect those additional buildings that were not included in the initial information submitted to the board. The additional buildings are part of the Speed School of Engineering and will include: WS Speed, JB Speed, Ernst Hall, Sackett Hall, Duthie Center, and Vogt.**

**2 Capital Renewal Replace and Upgrade Pool** **\$100,000,000**

This pool authorization will allow implementation of traditional deferred maintenance/capital renewal projects for building system assets that have reached or exceeded their life expectancy, and in cases have simply failed completely and are/may cause collateral damage to other building systems or equipment. (C-PI) (A detailed listing of capital renewal projects begins on page two.)

*\*The university has no general fund projects planned beyond the 2018-2020 biennium.*

**University of Louisville – Deferred Maintenance Projects**

<b>Project</b>	<b>Facility Name</b>	<b>2018-2020</b>	<b>2020-2022</b>	<b>2022-2024</b>
<b>Data Card Security Panel</b>				
Upgrade Security Panels	All Campuses		\$85,000	
Continue Upgrade of Data Collection Panel System	HSC Campus	\$200,000		
<b>Electrical Upgrade Projects</b>				
Upgrade obsolete electrical switchgear	52 Medical Dental Apartments	10,000		
Replace Control Panel	55A Research Tower	50,000		
Service, Calibrate & Test High Voltage Switch	55E Baxter 1, 55F Baxter 2, 59B K-wing & C2 Substations	30,000		
Service, Calibrate & Test High Voltage Switch	55E Baxter I Research	15,000		
ARC Flash Study	55E Baxter I Research	100,000		
Service, Calibrate & Test High Voltage Switch	55G CTR	10,000		
Service, Calibrate & Test High Voltage Switch	56 KY Lions Eye Center	15,000		
Arc Flash Study	All Campuses		20,000	\$20,000
Infrared Testing	All Campuses	20,000		
Maintain Fire Extinguishers	All Campuses	60,000		
Outdoor Lighting	All Campuses	50,000		
Replace High Voltage Cable & Switchgear	All Campuses	550,000		
Replace Low Voltage Switchgear	All Campuses		300,000	
Transformer Replacement	All Campuses		195,000	
Replace Campus Electrical Feeders	Belknap Campus	150,000		
Upgrade High Voltage Electrical Loop	Belknap Campus	595,000		
Upgrade Electrical switchgear	Brigman Hall		250,000	
Upgrade Electrical switchgear	Burhans Hall		300,000	
Replace UPS Batteries 2020	Ctr for Predictive Medicine			6,000
Replace building transformer	Davidson Hall			50,000
Upgrade Elec switchgear	Dougherty Hall		250,000	
Replace Motor Control Center	Ernst Hall			70,000
Upgrade Electrical switchgear	Founders Union	125,000		
Replace lighting & dimming system in Multipurpose room 2nd Floor	Founders Union	75,000		
Upgrade Electrical switchgear	Gardiner Hall		200,000	
Upgrade Electrical switchgear	Gottschalk Hall	200,000		
Replace bare neutrals	Gottschalk Hall	200,000		
Upgrade Electrical switchgear	Grawemeyer Hall		350,000	
Replace Transformer	Grawemeyer Hall		75,000	
Upgrade Electrical switchgear	Humanities		350,000	
Upgrade Electrical switchgear	JB Speed	400,000		
Replace Transformer	JB Speed	75,000		
Replace bare neutrals	JB Speed	550,000		
Upgrade Electrical switchgear	Jouett Hall			150,000
Replace electrical switchgear	Life Sciences	500,000		
Replace bare neutrals	Life Sciences	550,000		
Replace UPS Batteries 2017	Med Center III	15,000		
Replace bare neutrals	Medical Dental Research	550,000		
Replace automatic transfer switch	Miller Technology		150,000	
Replace UPS Batteries 2020	Miller Technology			85,000
Replace bare neutrals	Miller Technology	250,000		

Replace Motor Control Center	Natural Science	150,000		
Replace electrical switchgear	Natural Sciences	350,000		
Replace Transformer	Natural Sciences	75,000		
Replace bare neutrals	Natural Sciences	550,000		
Replace bare neutrals	Oppenheimer Hall	200,000		
Replace UPS Batteries 2020	Public Safety			12,000
Replace Transformer	Schneider Hall	75,000		
Replace bare neutrals	Schneider Hall	550,000		
Clock Tower	Student Activates Center		15,000	
Replace bare neutrals	Urban Research	200,000		
Upgrade Electrical switchgear	WS Speed	350,000		
<b>Elevator/Escalator Repair projects</b>				
Upgrade elevator	55B - Instructional Bldg	150,000		
Upgrade Elevator	55D -Kornhouser Library	175,000		
Upgrade LULA Elevator	Administrative Annex	75,000		
Upgrade Elevators	Chemistry Building			200,000
Upgrade Elevator	Duthie Center			150,000
Upgrade Freight Elevator	Ekstrom Library			175,000
Upgrade Elevators	Founders Union			175,000
Upgrade Freight Elevator	Founders Union		150,000	
Upgrade Elevators	Gottschalk Hall		140,000	
Upgrade Elevators	Houchens Building		150,000	
Upgrade Elevators	JB Speed		140,000	
Upgrade Elevators	Jouett Hall		140,000	
Upgrade Elevator	Ky Lions Eye Bank	175,000		
Upgrade Elevators	Life Sciences		140,000	
Upgrade Freight Elevator	Medical Dental Research		200,000	
Upgrade Elevators	Natural Sciences			140,000
Upgrade Elevator	Parking Garage			175,000
Upgrade Elevator	Parking Garage			125,000
Upgrade Elevator	Patterson hall			175,000
Upgrade Stage Lift	School of Music			100,000
Upgrade Escalators (8 Escalators) - Escalators scheduled to be removed 2017	Student Activities Building	400,000		
Upgrade hardware in shaft	Student Activities Building	50,000		
Upgrade Elevators	University Club			225,000
Upgrade Elevators	Urban Research			150,000
Upgrade Elevators	Vogt Building	150,000		
<b>Emergency Generator Repair, Replacement or Relocation projects</b>				
Maintain Emer Generator Fuel Tanks	All Campuses		75,000	
Repl & Relocate Emerg Generator	Ekstrom Library	300,000		
Repl & Relocate Emerg Generator	Kosair Charities Ped Center			160,000
Repl & Relocate Emerg Generator	Kwing			160,000
Repl Emergency Generator & ATS	Life Sciences		95,000	
Repl & Relocate Emerg Generator	Medical Dental Research		750,000	
Upgrade Emergency Generator	School of Business			150,000
Repl & Relocate Emerg Generator	School of Law	125,000		
Repl & Relocate Emerg Generator	School of Public Health		200,000	
Repl & Relocate Emerg Generator	Student Activities Center		125,000	
Repl & Relocate Emerg Generator	Vogt Building		100,000	

Fire Extinguisher Upgrades				
Repair Sign Lighting	55A Research Tower	30,000		
Exterior Concrete Repairs	55A Research Tower	275,000		
Tuckpointing	Abell Administration	100,000		
Steps & Ramp Repairs	Abell Administration	35,000		
Replace Entrance Doors	Abell Administration	8,000		
Pressure Wash All Buildings	Belknap & HSC	250,000	250,000	300,000
Replace Pedestrian Overpass Deck	Belknap Parking Garage	230,000		
Tuck pointing	Brigman		25,000	
Tuck pointing	Brodschi Hall		50,000	
Colonnade Repairs	Burhans Hall		80,000	
Foundation Repairs	Chemistry Building			150,000
Paint Cornice	Cultural Center	5,000		
Door Replacement	Davidson Hall		75,000	
Paint Columns	Dougherty Hall		8,000	
Tuck pointing	Fairfax		15,000	
Tuck pointing and Canopy	Gardiner Hall		40,000	
Door Replacement	Gardiner Hall			20,000
Door Replacement	Grawemeyer Hall			20,000
Window Caulk and Paint	Grawemeyer Hall	75,000		
Tuck pointing	Honors Building		10,000	
Tuck pointing	Houchens Building		35,000	
Caulking	Houchens Building		10,000	
Repair Steps & Handrails	Interfaith Center			30,000
Door Replacement	JB Speed			35,000
Tuck pointing	Jouett Hall		20,000	
Brick Pavers Repair	Lutz Hall			7,500
Tuck Pointing	Medical Dental Research	400,000		
Steps & Ramp Repairs	Natural Sciences			40,000
Tuck pointing	Oppenheimer Hall		25,000	
Paint Crown Trellis	Papa John's Cardinal Stadium	175,000		
Paint Cornice	Patterson hall	9,000		
Tuck pointing	Patterson Hall		15,000	
Trim & Shutter Repair	Playhouse			100,000
Paint Cornice	Sackett Hall	12,000		
Foundation Repairs	Sackett Hall		15,000	
Door Replacement	Sackett Hall			25,000
Repair overhang and Expansion Joint	Schneider Hall			150,000
Foundation Repairs	Strickler Hall			30,000
Door and Hardware Repair	Student Activities Center		20,000	
Waterproof Clock Tower	Student Activities Center			15,000
Caulking	Student Activities Center	30,000		
Foundation Repairs	UPDC			15,000
Front Steps Repair	UPDC			10,000
Foundation Repairs	WS Speed			20,000
Fire Alarm System Upgrade projects				
Fire Alarm System Upgrades	Burhans Hall			75,000
Fire Alarm System Upgrades	Davidson Hall			110,000
Fire Alarm System Upgrades	Dougherty Hall			70,000
Fire Alarm System Upgrades	Ernst Hall	95,000		

Fire Alarm System Upgrades	Founders Union			75,000
Fire Alarm System Upgrades	Gardiner Hall	85,000		
Fire Alarm System Upgrades	Gottschalk Hall	70,000		
Fire Alarm System Upgrades	JB Speed	125,000		
Fire Alarm System Upgrades	Lambda Chi		75,000	
Fire Alarm System Upgrades	Minority Affairs		25,000	
Fire Alarm System Upgrades	Natural Sciences	140,000		
Fire Alarm System Upgrades	North Information Center			5,000
Fire Alarm System Upgrades	Parking Deck (HSC)		50,000	
Fire Alarm System Upgrades	Sackett Hall	80,000		
Fire Alarm System Upgrades	Service Complex	67,000		
Fire Alarm System Upgrades	South Information Center		5,000	
Halon System Upgrade	Strickler Hall	75,000		
Fire Alarm System Upgrades	UPDC			15,000
Fire Alarm System Upgrades	Vogt Building	100,000		
Fire Alarm System Upgrades	WS Speed	90,000		
<b>Building Interior Repair projects</b>				
Repair/Replace animal care floor	51 Medical Dental Research	20,000		
Repair floors & painted surfaces	55A Animal Care	50,000	100,000	
Upgrade Restrooms	55A Research Tower	250,000		
Upgrade Restrooms	55D Kornhauser Library	100,000		
Windows - Reseal atrium skylight	56A KY Lions Eye	10,000		
Classroom Upgrades	All Campuses	595,000	300,000	300,000
Replace Carpet/Floor Tile	All Campuses			595,000
Upgrade Restrooms	Brigman			50,000
Repair/Replace animal care floor	Cardio Vascular Bldg (CII)	50,000		
Repair/Replace animal care floor	Center for Transitional Research	50,000		
Ceiling Corridors	Davidson Hall			175,000
Upgrade Restrooms	Davidson Hall			35,000
Repair Floors - Animal Care Center	Donald Baxter	50,000		
Upgrade Restrooms	Ekstrom Library			100,000
Ceilings - hallways	Ernst Hall			50,000
Interior Dome Refurbishment	Grawemeyer Hall			150,000
Ceilings/lights - Auditorium	Humanities			165,000
Ceiling Repairs	JB Speed			200,000
Upgrade Restrooms	Jouett Hall			10,000
Upgrade Restrooms	Life Sciences			100,000
Upgrade restrooms	Miller Technology			200,000
Ceilings	Natural Sciences			50,000
Repair/Replace animal care floor	Research Resource	50,000		
Upgrade Restrooms	Schneider Hall			60,000
Upgrade Restrooms	Service Complex			50,000
Upgrade Restrooms	Student Activities Center			450,000
<b>Mechanical Upgrade projects</b>				
Replace remaining obsolete DMS controllers	51 Medical Dental Research	125,000		
Repair/replace gas lines	51 Medical Dental Research	20,000	20000	20000
Replace insulation on piping and ductwork in attic space	52 Medical Dental Apts	60,000		
Replace mechanical room piping insulation	52 Medical Dental Apts	35,000		
Replace old steam boilers	52 Medical Dental Apts	350,000		

Replace 1961 steam boilers with hot water condensing boilers	52 Medical Dental Apts	300,000		
replace Fitness Center RTU	54E intramurals	25,000		
Phase I - Cast Iron Piping Replacement	55A - Research Tower		150,000	
Replace Chilled Water Pumps	55A - Research Tower			50,000
Replace condensate pump	55A - Research Tower			30,000
Replace Hot Water Pumps/Heat Exchangers	55A - Research Tower			50,000
Replace Lab Air Compressor	55A - Research Tower			180,000
Replace Sanitary Pumps	55A - Research Tower			20,000
Replace Walk-In Freezers (10)	55A - Research Tower			595,000
Upgrade Pipe Insulation	55A - Research Tower			90,000
Upgrade Air Handler & Controls	55A - Research Tower			595,000
Replace cracking cast iron plumbing piping	55A Research Building	20,000	20000	20000
Replace lab reverse osmosis water supply	55A Research Building	50,000		
Replacement of Environmental Chambers	55A, 55B, 55C	595,000		
Replace Chill Water Pumps	55B Instructional Bldg			50,000
Replace heating/cooling coils	55B Instructional Bldg			50,000
Upgrade Plumbing	55B Instructional Bldg			50,000
Upgrade Insulation	55B Instructional Bldg			75,000
Replace Lab Air Compressors	55C Dental School	90,000		
Replace Lab Dry Vacuum	55C Dental School	50,000		
Replace condensate pump	55C Dental School			30,000
Replace condensate pump	55D Kornhauser Library			30,000
Replace VAV Boxes	55D Kornhauser Library			150,000
Aquis Recoat AHU	55E Baxter I		60,000	
Update obsolete security access control system	55E Baxter I Research	50,000		
Replace obsolete VFDs on AHU Fans	55E Baxter I Research	40,000		
Aquis Recoat AHU	55F Baxter II		150,000	
Replace obsolete Siemens controllers	55F Baxter II Research	205,000		
Replace obsolete VFDs on AHU Fans	55F Baxter II Research	60,000		
Replace remaining obsolete DMS controllers	56 KY Lions Eye Center	200,000		
Replace MMC in basement	56 KY Lions Eye Center	125,000		
Update obsolete security access control system	56 KY Lions Eye Center	20,000		
Replace Lab Air Compressor	56 KY Lions Eye Center	40,000		
Replace obsolete DMS controllers	59B K-wing/south wing	200,000		
Replace obsolete VFDs on AHU Fans	59B K-wing/south wing	15,000		
Replace remaining obsolete DMS controllers	59D Kosair Pediatric Center	200,000		
Replace obsolete VFDs on AHU Fans	59D Kosair Pediatric Center	15,000		
MISC Mechanical Upgrades	All Campuses	200,000	200,000	200,000
Expand Energy Management System	All Campuses			200,000
Indoor Air Quality	All Campuses			300,000
Upgrade energy management panels	Baxter Research Center		115,000	
Replace insulation Belknap and Shelby Campus	Belknap & Shelby	25,000	25,000	25,000
Replace liebert units	Belknap Campus		225,000	
Clean Ductwork	Belknap Campus	200,000		
Replace Sump Pump Crock Lids	Belknap Campus		20,000	
Replace (6) obsolete Water Flow Meters	Belknap Campus			40,000
HVAC Upgrades	Brigman Hall	95,000		
Retrofit Multizones to VAV DDC	Brigman Hall	75,000		
Replace remaining obsolete DMS controllers	Brigman Hall			7,000
Replace DX System	Brodschi Hall		16,000	

Replace Fan Coils Unit & Control	Brodschi Hall	65,000		
Install backup Pump tower	Burhans Hall	15,000		
Replace heating boilers	Burhans Hall	300,000		
CPM Chiller for Gettinger equipment	Center for Predictive Medicine	50,000		
Install chilled water make up to Air Handler Unit	Center for Predictive Medicine		14,000	
Replace remaining obsolete DMS controllers	Chemistry Building			9,000
Replace Obsolete energy management panels	CII			145,000
Replace Obsolete energy management panels	CTR			90,000
Install heated slide gate operator and electric	Ctr Predictive Medicine	20,000		
Upgrade Air Handler & Controls	Dougherty Hall	595,000		
Replace remaining obsolete DMS controllers	Dougherty Hall	7,000		
Replace Liebert Unit Nitrate Vault	Ekstrom Library		50,000	
HVAC Upgrades	Ekstrom Library	200,000		
Replace Lab Steam Boiler	Ernst Hall	55,000		
Replace remaining obsolete DMS controllers	Ernst Hall	65,000		
Replace remaining obsolete DMS controllers	Ernst Hall			65,000
Update obsolete Siemens DDC	Fairfax Building			20,000
Add back up tower & chill water pumps	Founders Union	50,000		
Replace Chiller System	Founders Union	300,000		
Backup cooling pump	Gardiner Hall	30,000		
Replace obsolete Siemens controllers	Gardiner Hall	35,000		
Replace remaining obsolete DMS controllers	Gardiner Hall	7,000		
Upgrade Radiator System to Hot Water	Gottschalk Hall		170,000	
Replace DX System	Grawemeyer Hall		25,000	
Replace traps, valves & heat exchangers & pumps	Grawemeyer Hall		150,000	
Replace remaining obsolete DMS controllers	Grawemeyer Hall	30,000		
Replace DX System	Honors Building			25,000
Replace DX System	Houchens Building		75,000	
Replace obsolete DMS controllers	Houchens Building			160,000
Upgrade HVAC System	Interfaith Center	30,000		
Replace remaining obsolete DMS controllers	International Development	7,000		
Replace Pumps & Piping	JB Speed		150,000	
Mechanical Piping Replacement	JB Speed	175,000		
Replace Air Handler Unit & Controls	JB Speed	425,000		
Replace remaining obsolete DMS controllers	JB Speed			45,000
Replace fan coil units	Jouett Hall		100,000	
Replace/Relocate Mechanical System	Jouett Hall	595,000		
Replace Air Compressor	Kentucky Lions Eye			60,000
Clean building's exterior	Kentucky Lions Eye			50,000
Clean Duct	Kosair Charities Pediatric Cntr			25,000
Clean Duct	K-Wing			30,000
Replace heat/ac unit	Lambda Chi	75,000		
Replace domestic boiler (1of 2)	Life Science	25,000		
Replace Domestic Boiler (2)	Life Sciences	75,000		
Replace steam boiler	Life Sciences	200,000		
Replace Air Handler Units 1, 2, 3	Life Sciences	595,000		
Replace Exhaust Fan	Lutz Hall		50,000	
Correct Ductwork Problems	Lutz Hall	60,000		

Replace Air Handler Unit	Lutz Hall	150,000		
Replace Boiler	Lutz Hall	350,000		
Replace remaining obsolete DMS controllers on AHUs, hot & chilled water systems, hood exhaust and labs	Lutz Hall			420,000
Update Obsolete DMS Fume Hood Lab Controls	Lutz Hall			90,000
Replace remaining obsolete DMS controllers	McCandless Hall			7,000
Retrofit Pneumatic to DDC on MZAHU, AHU HX & CWS	McCandless Hall	24,000		
Replace Air Handler Unit & Upgrade Controls	McCandless Hall	150,000		
Duct Cleaning	Medical Dental Research	50,000		
Replace Air Compressor	Medical Dental Research	50,000		
Replace Walk-In Freezers (5)	Medical Dental Research	475,000		
Replace Liebert #5 in the darkroom	Miller IT Center	60,000		
Replace two power distribution Units	Miller Technology	45,000		
Exhaust Fan Repairs	Miller Technology		10,000	
replace air handler in underground building	Miller Technology	85,000		
Replace Liebert Units	Miller Technology		200,000	
Replace Direct Buried Piping	Miller Technology			500,000
Reroute chill water piping through building	Miller Technology	80,000		
Air Handler Unit #6	Miller Technology	90,000		
Replace obsolete Siemens controllers	Miller Technology	20,000		
Filter Replacements Sand Media	Natatorium	50,000		
Install valves for shower rooms	Natatorium	20,000		
Total Mechanical Replacement (North)	Natural Sciences	595,000		
Total Mechanical Replacement (S. Pent)	Natural Sciences	595,000		
Terminal Boxes and Controls	Natural Sciences	595,000		
Replace obsolete Siemens controllers	Natural Sciences	20,000		
Replace remaining obsolete DMS controllers	Natural Sciences			17,000
Total Mechanical Replacement	Oppenheimer Hall	595,000		
Replace Condensers	Parking Deck (HSC)	50,000		
Replace HVAC Components	Parking Deck (HSC)	60,000		
Upgrade HVAC fan coil units	Patterson Hall		160,000	
Upgrade Controls & Automation	Patterson Hall	60,000		
Install Back up DX Liebert	Planetarium			175,000
Replace Condensers	Playhouse	200,000		
Replace Liebert Unit	Public Safety	30,000		
DPS - Replace radio room AHU and condenser	Public Safety	25,000		
Replace 2 air handler units	Red Barn	200,000		
Replace Boiler & Air Handler Unit	Red Barn	150,000		
Replace Fan Coil Units	Sackett Hall		200,000	
Replace heating/cooling pumps	Sackett Hall		40,000	
Upgrade heating system & controls	Sackett Hall	850,000		
Update obsolete DMS DDC on AHU, HX & CWS	Sackett Hall			7,000
Upgrade HVAC System	Schneider Hall	595,000		
Upgrade HVAC System	School of Business	325,000		
Replace remaining obsolete DMS controllers	School of Business			140,000
Replace Condensate system	School of Education			50,000
Replace Air Handling Unit	School of Education	595,000		
Replace VAV Boxes	School of Education	595,000		
Replace A.H.U. for basement lounges #12	School of Law			50,000



Replace air handler unit #11	School of Law			15,000
Replace chilled water valves for A.H.U.	School of Music	40,000		
Rework Humidification System	School of Music	120,000		
Air Handler Unit Upgrades	School of Music	290,000		
Modify 2nd Floor HVAC	Service Complex	150,000		
Replace Air Handler Unit Systems	Service Complex			50,000
Replace Cooling Tower Fill in Towers #11-14	Steam Plant		100,000	
Rebuild Compressor and Regasket Chiller #4	Steam Plant		100,000	
Rebuild Compressor and Regasket Chiller #5	Steam Plant	100,000		
Rebuild Compressor and Regasket Chiller #6	Steam Plant		100,000	
Increase chill water piping size-old tunnel	Steam Plant		500,000	
Install filter on tower water	Steam Plant		50,000	
Replace chill water make up tank	Steam Plant			150,000
Replace Direct Buried Pipe	Steam Plant			595,000
Replace HP Traps	Steam Plant			36,000
Replace Tunnel Piping	Steam Plant		595,000	
Replace water softeners on campus boilers	Steam Plant			50,000
Rework Flash Tanks	Steam Plant			100,000
Replace Concrete expansion joints/tunnel ceilings	Steam Plant	250,000	250,000	250,000
Replace cooling tower isolation valves and gear operators	Steam Plant		40,000	
Replace pumps & valves	Stevenson Hall	50,000		
Replace remaining obsolete DMS controllers	Stevenson Hall			14,000
Replace Condensate System	Strickler Hall		10,000	
Replace Cooling Pumps	Strickler Hall		10,000	
Replace Heating Pumps	Strickler Hall		10,000	
Upgrade HVAC System	Strickler Hall	595,000		
Upgrade HVAC, Ceiling, and Lighting in Middleton Auditorium	Strickler Hall	110,000		
Replace RPZ Valves	Student Activities Building		7,000	
Replace Obsolete VFDs on AHU 1 Supply and Return Fans	Student Activities Building			10,000
Replace roof drains & piping	Student Activities Center	90,000		
Replace condensers (5)	Tennis Center		50,000	
Replace domestic water heaters	Tennis Center		12,000	
Replace remaining obsolete DMS controllers	Thrust Theatre & Studio Arts	8,000		
Update obsolete DMS on MZAHUS, AHUs, HX & CWS	Thrust Theatre & Studio Arts			7,000
Replace worn obsolete electronic controls	Thrust Theatre & Studio Arts			40,000
Replace Heating Boiler	Unit Plan Design & Constr		50,000	
Replace air handler unit	University Club	25,000		
Replace heat exchanger	University Club			20,000
Upgrade HVAC Controls & pumps	University Club	60,000		
Upgrade Fan Coils & Automation	Urban Research	300,000		
Retrofit to DDC on MAU, Chiller & Boiler	Urban Research	20,000		
Replace Air Handler & Equipment	Vogt Building			55,000
Pump Replacements	Vogt Building	12,000		
Update obsolete DMS on AHUs, HX, Chiller & CT	Vogt Building			50,000
Replace rotten runout pipes for hot and chilled water lines	WS Speed	10,000		
Replace building pumps	WS Speed		30,000	
Replace Fan Coil Units	WS Speed		200,000	

Upgrade Heating & Controls	WS Speed	70,000		
Replace 2nd Boiler	Yum Center	25,000		
Replace Roof	55A - Research Tower		300,000	
<b>Roof Repair and Replacement projects</b>				
Replace Roof between 55A-55B	55A - Research Tower		25,000	
Replace Roof	Davidson Hall			400,000
Replace Roof	Environmental Health		75,000	
Replace Roof	Fairfax Building		260,000	
Replace Roof	Law School		300,000	
Replace Roof	Life Sciences			300,000
Replace Roof	Medical Dental Res	200,000		
Replace Roof	Public Safety	75,000		
Wash, Prime, Paint Roof	Red Barn	30,000		
Replace Roof	Schneider Hall		306,000	
<b>Sprinkler Systems Upgrades</b>				
Sprinkler Systems Upgrade	55B - Instructional Bldg			40,000
Sprinkler Systems Upgrade	55D - Kornhauser Library		80,000	
Sprinkler Systems Upgrade	Brigman Hall	75,000		
Sprinkler Systems Upgrade	Gardiner Hall	50,000		
Sprinkler Systems Upgrade	Gottschalk	50,000		
Sprinkler Systems Upgrade	Humanities			105,000
Sprinkler Systems Upgrade	International Dev			25,000
Sprinkler Systems Upgrade	Jouett Hall		25,000	
Sprinkler Systems Upgrade	Miller Technology			105,000
Sprinkler Systems Upgrade	Natural Science		105,000	
Sprinkler Systems Upgrade	Oppenheimer Hall		50,000	
Sprinkler Systems Upgrade	Patterson Hall		50,000	
Sprinkler Systems Upgrade	Schneider Hall		110,000	
Sprinkler Systems Upgrade	School of Music			80,000
<b>Surface Repair projects</b>				
Concrete Pavers Repair	55D Kornhauser Library	100,000	100,000	100,000
Repair Walking Surfaces	All Campuses	300,000		
Blacktop & Resurfacing	All Campuses		695,000	
Correct drainage issues	Belknap Campus			290,000
Landscape Sprinkler Control Upgrade	Belknap Campus			65,000
<b>Window Repair and Replacement projects</b>				
Replaced Windows with Broken Seals	55A Research Building	65,000		
Replace Roof Skylight	55D Kornhauser Library	150,000		
Window Replacement	55D Kornhauser Library	125,000		
Window Repair	Baxter I	100,000		
Window Repair	Baxter II	100,000		
Window Replacement	Brigman Hall			350,000
Vestibule Glass Repair	Chemistry Building	40,000		
Window Replacement	Davidson Hall	50,000		
Window Replacement	Ekstrom Library			100,000
Replace Roof Skylight	Ekstrom Library			220,000
Window Replacement	Gardiner Hall			300,000
Window Replacement	Gottschalk Hall		200,000	
Window Replacement	Grawemeyer Hall		325,000	
Window Replacement Lower windows with Glass Block	Houchens			40,000

Window Replacement	JB Speed			225,000
Window Replacement	Jouett Hall			150,000
Window Replacement-Phase I	Medical Dental Research	500,000		
Window Repair	Miller Information Tech		50,000	
Window Replacement	Natural Science			200,000
Window Replacement	Oppenheimer Hall		150,000	
Window Replacement	Patterson Hall			200,000
Window Replacement	Sackett Hall			110,000
Window Replacement	Steam Plant			25,000
Window Repair	Strickler Hall		50,000	
Skylight Replacement	Student Activities Center	125,000		
Window Replacement	Thrust Theatre			65,000
Window Replacement	Urban Research	300,000		
Window Replacement	WS Speed			175,000
Total needs by biennium		<b>\$33,416,000</b>	<b>\$13,958,000</b>	<b>\$16,859,500</b>
Total needs 6-year period				<b>\$64,233,500</b>

**UNIVERSITY OF LOUISVILLE**  
**Proposed Projects Involving Agency Bonds**  
(amounts in **bold** are the total budget)

**2018-2020**

(Projects listed by agency priority; descriptions are from the agency submission)

- |          |  |                      |
|----------|--|----------------------|
| <b>1</b> | <b>Capital Renewal Replace &amp; Upgrade Pool</b>  | <b>\$100,000,000</b> |
|          | This pool authorization will allow implementation of traditional deferred maintenance / capital renewal projects for building system assets that have reached or exceeded their life expectancy, and in cases have simply failed completely and are/may cause collateral damage to other building systems or equipment. <i>(A detailed listing of the potential capital renewal projects begins on page six.)</i> (C-PI) |                      |
| <b>2</b> | <b>Renovate and Expand Threlkeld Resident Hall</b>   | <b>\$30,800,000</b>  |
|          | This project will renovate and expand the Threlkeld Resident Hall, increasing its capacity from 242 to 290 beds on the Belknap Campus. (C-PI)  |                      |
| <b>3</b> | <b>Construct - College of Business Building</b>  | <b>\$120,000,000</b> |
|          | This project will construct a new 200,000 gross square foot building for the College of Business to house current and expanded programs and operations. (C-O)  |                      |

**2020-2022**

Demolish and Replace Miller Resident Hall	\$60,000,000
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**2022-2024**

Renovate Unitas Resident Hall	\$20,000,000
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**UNIVERSITY OF LOUISVILLE**  
**Proposed Projects NOT Involving the General Fund or Agency Bonds**  
(Projects listed in alphabetical order)  
**2018-2020**

**Construct Artificial Turf Field for Intramural** **1,215,000 RF**

This project will replace the natural grass field used by intramural programs and the marching band with a synthetic turf field with under-field drainage system. (C-PI)

**Construct Athletic Grounds Building** **1,550,000 OT-P**

This project will construct a 7,000 square foot grounds and maintenance building at the north end of the football practice field facility. (C-O)

**Construct Athletics Office Building** **7,500,000 OT-P**

This project would construct a 25,000-gross-square-foot building for athletic administration to relocate many sport coaching and administrative staff offices from the former football training building off campus at the Kentucky Fair and Exposition Center to the Belknap campus. (C-O)

**Construct Belknap 3rd Street Improvements** **2,180,000 RF**

This project will provide pedestrian, roadway and streetscape improvements along the 3rd Street corridor between Eastern Parkway and Cardinal Blvd. on the Belknap Campus. (C-O)

**Construct Belknap Century Corridor Improvement** **1,250,000 RF**

This project will provide pedestrian and landscape improvements in the Century Corridor area of the Belknap Campus. (C-O)

**Construct Belknap Stormwater Improvements** **5,000,000 RF**

This project will improve storm water runoff and retention on Belknap Campus to aid in prevention of flooding on campus. (C-PI)

**Construct College of Business Courtyard/Café** **1,800,000 RF**

This project will partially enclose the existing exterior courtyard at the College of Business and create a small café and gathering space for students. (C-O)

**Construct Institute for Product Realization** **35,980,000 OT-P**

This authorization would allow for construction of a 225,000-gross-square-foot building on Belknap Campus to house the Institute for Product Realization as part of the Belknap Research Park. (C-O)

**Construct Soccer Stadium Practice Field** **2,000,000 RF**

This project will develop a soccer practice field to complement the recently constructed Soccer Stadium. The practice facility will be located along the southeast side of the stadium. (C-O)

**Construct TV Broadcast/Production Studio** **8,000,000 OT-P**

This project will construct and fully equip a TV broadcast and production studio which is a new requirement of the ACC. In addition, construction/renovation of IT network infrastructure will be required between the studio and the existing university sports venues. The facility will allow athletics to produce taped segments as well as have a live broadcast of sporting events. (C-O)

**Construct Athletic Equipment and Apparel Storage** **1,200,000 OT-P**

This project will construct a 6,500-square-foot equipment and apparel storage facility for the Athletic Department adjacent to or in close proximity to Papa John's Cardinal Stadium. (C-O)

**Construct Multidisciplinary Engineering Building #1** **65,000,000 RF**

This project will provide 125,000 GSF of new construction to develop a multidisciplinary engineering building on the existing Speed School complex. The new building will provide space for classrooms, instructional and research laboratories, faculty offices, and student service areas. (C-O)

<b>Construct Plant Based Pharmaceutical Research Facility</b>	<b>1,700,000 RF</b>
This project will construct a 2,000-square-foot plant based pharmaceutical research laboratory in shell space available in the Clinical Translational Research Building and Parking Garage on the Health Sciences Center campus. (C-O)	
<b>Construct Speed School Utility Infrastructure Upgrade</b>	<b>20,275,000 RF</b>
Project is essential prerequisite to advance new construction projects supporting the Belknap Campus Speed School of Engineering. The first is the physical expansion of the Central Steam and Chilled Water Plant by 8,000 gross square feet, along with the installation of additional chiller and cooling tower equipment to increase chilled water production capacity. The second is construction of additional steam, chilled water, electrical and information technology distribution systems most of which originate from the Central Steam and Chilled Water Plant. Included is the necessity to construct a new 1,700-linear-foot utility tunnel and relate distribution systems from the Central Plant to the Speed School complex. (C-O)	
<b>Expand Jim Patterson Stadium</b>	<b>9,500,000 OT-P</b>
This project would construct a 2,600-seat addition to the Jim Patterson Baseball Stadium, including restrooms, locker room and concession facilities. (C-PI)	
<b>Expansion Auto Book Storage-Retrieval System</b>	<b>4,900,000 RF</b>
This project will expand the existing automated book storage and retrieval system by adding high density storage shelving within the systems existing footprint. Then, library stacks space occupied by the collection moved to the new storage will be renovated into new student study and team collaboration space. (C-PI)	
<b>Improve Housing Facilities Pool</b>	<b>10,000,000 RF</b>
This pool will renovate, mitigate and improve existing housing facilities on the university campuses. The renovation of existing space is necessary to meet the needs of current and future residents. Many of the on-campus housing facilities are in need of significant infrastructure upgrades as well as general renovation and new furniture. This pool of projects includes those with a cost of \$600,000 or greater. (C-PI)	
<b>New Football Practice Field Lighting</b>	<b>60,000,000 OT-P</b>
This project would construct a field lighting system for the football practice facility located on the Belknap Campus. Currently, the football team is unable to practice during early morning or evening hours, but adding lights at the practice field would resolve that problem. This is beneficial because its keeps the student-athletes out of the extreme heat of late summer and early fall. (C-PI)	
<b>New Public/Private Partnership Residence Hall</b>	<b>60,000,000 OT-P</b>
This project will construct a new 500-bed residence hall as a public/private partnership with third party financing on or near the Belknap Campus to partially satisfy the 800-bed gap that was quantified in a recently completed demand study. (C-O)	
<b>Purchase Computer Processing System and Storage</b>	<b>2,000,000 RF</b>
This project is for computer processing and data storage systems to accommodate computing resources and storage in support of administration, instructional and research for faculty, staff, and students. This project will be an upgrade/replacement to existing enterprise systems depending upon the technology available and service needs in the respective fiscal year. Enterprise storage system of at least 1.5 PB capacity. (IT)	
<b>Purchase Content Management System</b>	<b>4,000,000 RF</b>
Content Management System: This would provide a comprehensive system to replace various web-based content authoring, management and storage systems in use at the university. (IT)	
<b>Purchase Fiber Infrastructure</b>	<b>3,500,000 RF</b>
This project will expand the university's fiber backbone network in the metropolitan Louisville area to provide services for new locations. This project will expand the university's ability to meet its missions of education, service and economic development. (IT)	
<b>Purchase Identity Management</b>	<b>2,000,000 RF</b>
Software for Identity and Access Management (IAM) (IT)	

<b>Purchase Land near Belknap Campus-East</b>	<b>2,000,000 RF</b>
This will provide authorization for purchase of land near the east side of Belknap Campus should it become available. (C-O)	
<b>Purchase Land near Belknap Campus North</b>	<b>8,500,000 RF</b>
This will provide authorization for purchase of land near the north end of Belknap Campus should it become available. (C-O)	
<b>Purchase Land near Belknap Campus South</b>	<b>6,500,000 RF</b>
This will provide for purchase of land near the south end of Belknap Campus if it becomes available. (C-O)	
<b>Purchase Land near Floyd Street Parcel I</b>	<b>5,000,000 RF</b>
This authorization would allow for the purchase of land along the Floyd Street corridor near Belknap Campus as it becomes available. (C-O)	
<b>Purchase Land near HSC Parcel III</b>	<b>3,120,000 RF</b>
This project will purchase a parcel of land near the east side of the Health Science Center campus should it become available. The parcel covers approximately 2 acres. (C-PI)	
<b>Purchase Land near HSC Parcel IV</b>	<b>3,240,000 RF</b>
This project will purchase a parcel of land near the south side of the Health Science Center campus should it become available. The parcel covers approximately 1.86 acres. (C-O)	
<b>Land Near HSC Parcel II</b>	<b>6,275,000 RF</b>
This project will purchase property adjacent to the Health Sciences Center campus should it become available. The property is a 2.8-acre parcel of land having commercial residential improvements. (C-O)	
<b>Purchase Networking System</b>	<b>8,000,000 RF</b>
This project will implement new high-speed networking technology to support the voice, data and video service needs of the university community. (IT)	
<b>Purchase Research Computing Infrastructure</b>	<b>7,000,000 RF</b>
This project would provide both local and cloud-based servers, storage and networking to support scientific computation, data management, visualization and analytics to further the university's research mission. (IT)	
<b>Purchase Security and Firewall Infrastructure</b>	<b>3,000,000 RF</b>
Network firewall and intrusion prevention system. This equipment will enhance the security and firewall infrastructure to protect data and systems from unauthorized access, intrusion and compromise. (IT)	
<b>Regional Biocontainment Lab Pressurization Upgrade</b>	<b>5,000,000 RF</b>
This project will replace and upgrade the room-to-room pressurization control at Regional Biocontainment Laboratory on the Shelbysburg campus. (C-PI)	
<b>Renovate Belknap Physical Plant Building</b>	<b>2,000,000 RF</b>
This project will renovate and adapt existing warehouse and office space just north of the Belknap campus to accommodate Physical Plant operations, thereby allowing the Service Complex property on the core campus to be repurposed for future development. (C-PI)	
<b>Renovate Chemistry Fume Hood Redesign Phase 2</b>	<b>9,750,000 RF</b>
This project will implement the second phase of life/safety improvements to the Chemistry Building's ventilation/exhaust system by replacing 105 existing fume hoods, installation of an additional 40 hoods for organic chemistry laboratories, installation of a variable air volume controls for supply and exhaust air, and related ductwork improvements. (C-PI)	

<b>Renovate Chemistry Teaching Labs/Auditorium</b>	<b>2,200,000 RF</b>
This project would include renovation of several teaching labs and a lecture hall on the first floor and lower level of the Chemistry Building. (C-PI)	
<b>Renovate College of Business Classrooms</b>	<b>2,000,000 RF</b>
This project will renovate and upgrade various classrooms in the College of Business to improve and update the instructional technology, lighting, interior finishes, and furniture. (C-PI)	
<b>Renovate College of Business Green Roof</b>	<b>1,150,000 RF</b>
This project will replace a green roof on a portion of the College of Business to eliminate intermittent leaks and enhance energy efficiency. (C-PI)	
<b>Renovate Dental School Administrative Space</b>	<b>1,000,000 RF</b>
This project will renovate and reconfigure office and administrative space in the lower level of the Dental School building for patient billing, dental informatics and IT support. (C-PI)	
<b>Renovate Ekstrom Library</b>	<b>57,200,000 RF</b>
This project will renovate an upgrade most of the original Ekstrom Library and its recent addition to address requirements of a very high research intensive institution, and further develop it as a resource that contributes to the university's academic and research mandates. (C-PI)	
<b>Renovate Flexner Way Mall</b>	<b>2,500,000 RF</b>
This project will construct various pedestrian and vehicle access improvements over the three block length of Flexner Mall on the Health Sciences Center campus. (C-PI)	
<b>Renovate Kosair Charities Pediatric Center</b>	<b>2,000,000 RF</b>
Following the occupancy of the new Pediatrics Medical Office Building that is now under construction, this project will renovate and repurpose clinical space in the Kosair Charities Pediatrics Center and adjacent K-Wing for faculty and administration offices for the School of Medicine and School of Nursing. (C-PI)	
<b>Renovate Life Sciences Building Vivarium</b>	<b>1,500,000 RF</b>
This project will renovate and upgrade the vivarium facilities in the Life Sciences Building on Belknap Campus. (C-PI)	
<b>Renovate Miller Hall Infrastructure</b>	<b>1,500,000 RF</b>
This project will upgrade some of the building systems in Miller Hall including replacement of electrical wiring, exit lighting updates and replacement of sprinkler heads. (C-PI)	
<b>Renovate Natural Science Building</b>	<b>30,000,000 RF</b>
This project will renovate the interior and renew the exterior of the Life Science Building on the Belknap Campus for the departments of Mathematics, Physics and Geology. (C-PI)	
<b>Renovate Parking Structures</b>	<b>3,600,000 RF</b>
This project will provide structural, waterproofing, mechanical, electrical and various other repairs for the Floyd, Chestnut and 620 parking garages. (C-PI)	
<b>Renovate Resurface and Repair Parking Lot</b>	<b>2,500,000 RF</b>
Resurface and repair all surface parking lots, include fencing updates at 63 sites totaling approximately 45 acres of area. (C-PI)	
<b>Renovate School of Medicine Building 55A</b>	<b>42,000,000 RF</b>
This project will be a phased renovation of building 55A for research laboratories, lab support, and general office requirements for the School of Medicine of the Health Sciences Center campus. (C-PI)	



<b>Renovate Threlkeld Hall Infrastructure</b>	<b>1,500,000 RF</b>
This project will upgrade some of the building systems in Threlkeld Hall including installation of a new fresh air intake system, replacement of electrical wiring and replacement of chilled water controls. (C-PI)	
<b>Renovate and Expand J.B. Speed Building</b>	<b>18,700,000 RF/OT-P</b>
The scope of the 1942-constructed J.B. Speed Building project includes the complete replacement of the buildings mechanical, electrical and information technology infrastructure, the provision of fire alarm and suppression systems, an elevator upgrade, upgrades to interior finishes, and replacement of exterior windows that respect the building's historic architecture. Included is a small addition on the rear of the building. (C-PI)	
<b>Renovate HSC Instructional and Student Services Space</b>	<b>20,000,000 RF</b>
This project will renovate and upgrade various instructional and student service spaces on the HSC campus serving the school of Medicine, Dental, Nursing and Public Health and Information Services. (C-PI)	
<b>Renovation Vivarium Facilities</b>	<b>5,000,000 RF</b>
This project will renovate and upgrade various vivarium facilities to support research. (C-PI)	
<b>Renovation and Adaption Projects for Various Buildings</b>	<b>50,000,000 RF</b>
This pool authorization will allow renovation and space adaptation projects to be implemented to any university building on the Belknap, Health Sciences Center or Shelby campus. Typical project types will include, but not be limited to, critical improvements to office, general-purpose classroom, laboratory classroom, research, residential, parking, athletic and recreational space to advance the university's 21st Century Initiatives. (C-PI)	
<b>Replace Artificial Turf Field I</b>	<b>1,250,000 OT-P</b>
This project will replace one of four existing artificial turf fields used by the Athletic Department. (C-PI)	
<b>Replace Artificial Turf Field II</b>	<b>1,250,000 OT-P</b>
This project will replace one of four existing artificial turf fields used by the Athletic Department. (C-PI)	
<b>Replace Electronic Video Boards</b>	<b>2,000,000 OT-P</b>
This project will allow for the replacement of video boards currently in place at the various athletic facilities, if a current board stops operating and needs to be replaced or if a newer technology calls for the replacement of a board. (C-PI)	
<b>Replace Papa John's Stadium Seat Replacement</b>	<b>5,460,000 OT-P</b>
This project would replace the 42,000 chair-back seats in the original bowl sections of Papa John's Cardinal Stadium. (C-PI)	
<b>Replace Parking Services Hardware and Software</b>	<b>2,600,000 RF</b>
Replace outdated Parking Services hardware and software includes gates, loops, entry/exit stations, and permit/AVI readers. (C-PI)	

**UNIVERSITY OF LOUISVILLE**  
**Proposed Projects NOT Involving the General Fund or Agency Bonds – *cont'd***  
(Projects listed in alphabetical order)

**2020-2022**

Construct Belknap Brandeis Corridor Imp	\$3,100,000 RF
Construct Shelbyhurst Tech Center/Conference Facility	20,500,000 OT-P
Construct Shelbyhurst Technology/Office Building	43,050,000 OT-P
Construct Multidisciplinary Engineering Building #2	48,225,000 RF
Expand School of Public Health and Info Sciences	11,600,000 RF
Expand and Renovate College of Education Building	59,250,000 RF
New The Identity Center	13,600,000 OT-P
Purchase Land near Floyd Street Parcel II	5,000,000 RF
Purchase Next Generation/ERP Support System IT	15,000,000 RF
Renovate Burhans Hall	17,000,000 OT-P
Renovate Schneider Hall	21,800,000 RF

**2022-2024**

Construct Belknap Center Place Plaza	\$8,840,000 RF
Construct Intramural Field Complex	7,780,000 RF
Construct Shelbyhurst Research and Dev Building	50,000,000 OT-P
Renovate Belknap Playhouse	5,500,000 RF
Renovate Dougherty Hall	9,250,000 RF
Renovate Founders Union Building	17,000,000 RF
Renovate HPES/Studio Arts Building	9,850,000 RF
Renovate Law School	50,000,000 RF
Renovate Oppenheimer Hall	4,500,000 RF
Renovate W.S. Speed Building	4,070,000 RF
Renovate and Expand Sackett Hall	21,300,000 RF